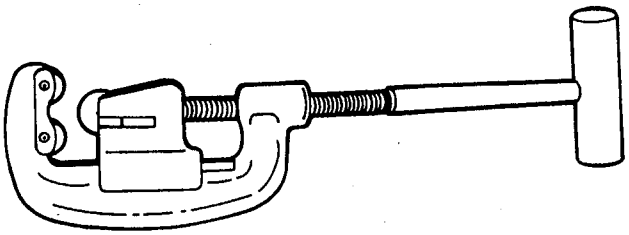
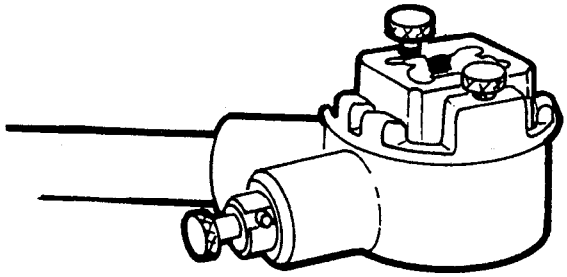
Chapter 35 PIPE CUTTING AND THREADING TOOLS

HOW TO CHOOSE AND USE THEM

The “Types and Uses” section provides you with a description of the pipe cutter and threading set. These pages should help you select the right cutting die to do the job.

The “Using” section tells you how to use the pipe cutter and threading set to perform the desired function. The “Care” procedures tell you how to care for the items.





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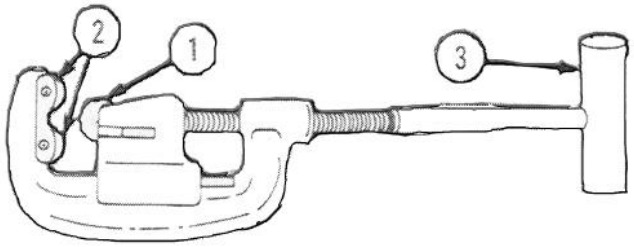
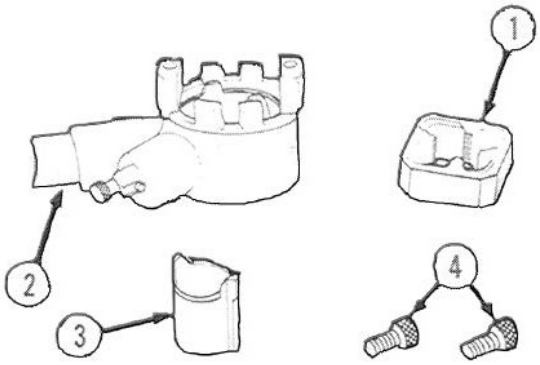
TYPES AND USES

PIPE CUTTERS



There are two sizes of pipe cutters. One size can cut from 1/8 to 2 inches, while the other can cut from 2 to 4 inches. The pipe cutter has a cutting blade (1) and two pressure rollers (2) which are adjusted and tightened by turning the handle (3). Pipe cutters are used to cut steel, brass, copper, wrought iron, and lead pipe.

PIPE THREADING SET

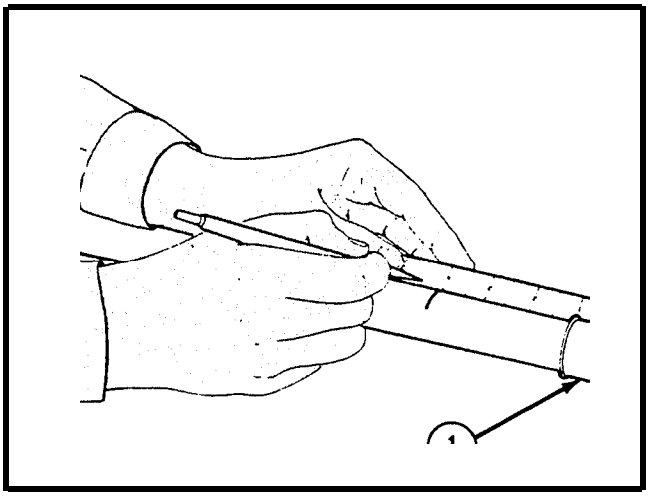


The pipe threading set contains an assortment of cutting dies (1) a handle or wrench (2) a collar (3), and locking screws (4). The cutting dies may range from 1/8-inch to 2 inches in diameter. The threading set is used to cut American Standard Pipe threads on steel, brass, copper, wrought iron, and lead pipe.

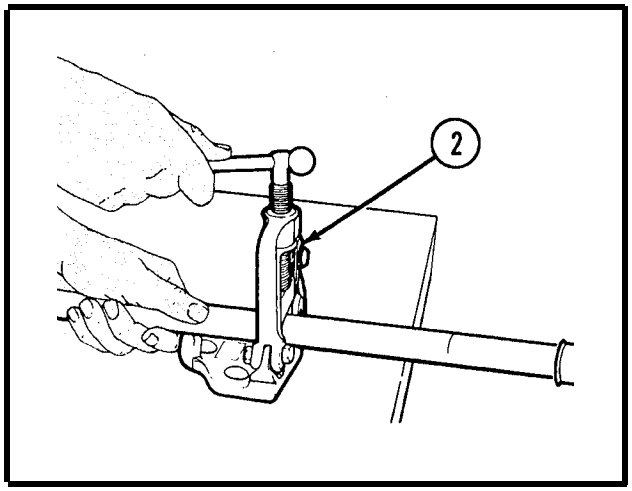
USING A PIPE CUTTER

WARNING

PIPE OFTEN COMES WITH A PROTECTIVE CAP (1). LEAVE THIS CAP ON. IT KEEPS YOU FROM GETTING CUT ON SHARP PIPE ENDS.

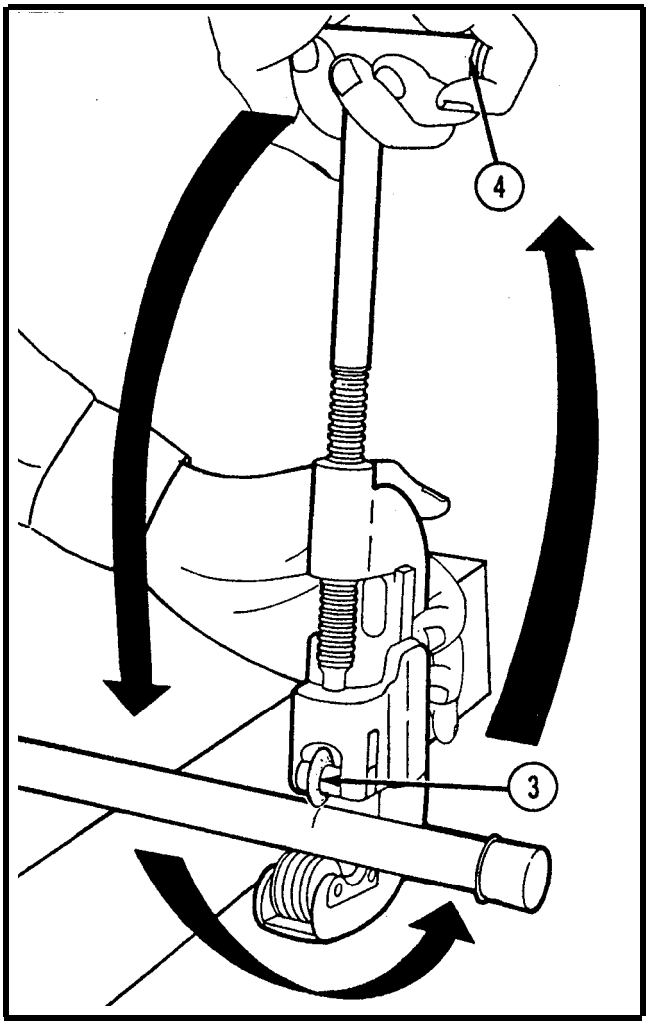


1 Measure from end of pipe and make a mark where you want to cut.



2 Fasten pipe securely in a pipe vise (2). Be sure mark is clear so that it can be cut. Pipe must be supported on both ends to keep it from bending.

USING A PIPE CUTTER - Continued



3 Open the jaws of the pipe cutter enough to allow the pipe cutter to be placed around the pipe. Adjust so that the cutting blade (3) is on the line.

4 Tighten the handle (4) until cutting blade makes contact with pipe.

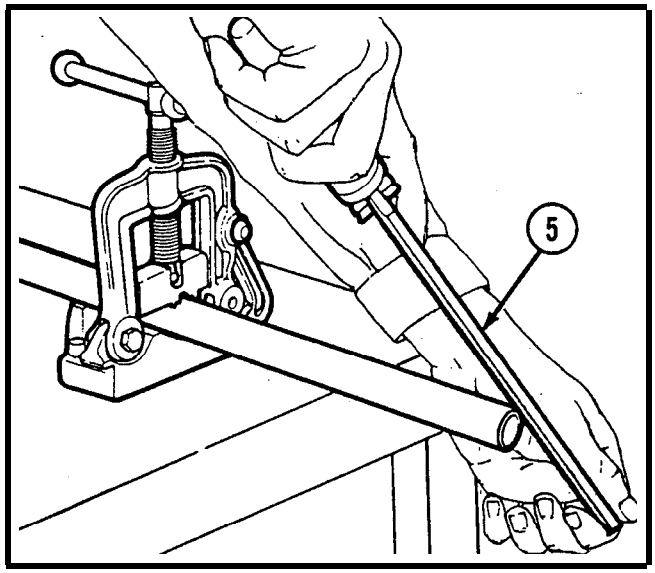
5 Then turn the handle (4) 1/4 of a turn more clockwise.

6 Now turn the whole cutter one turn around the pipe (counterclockwise).

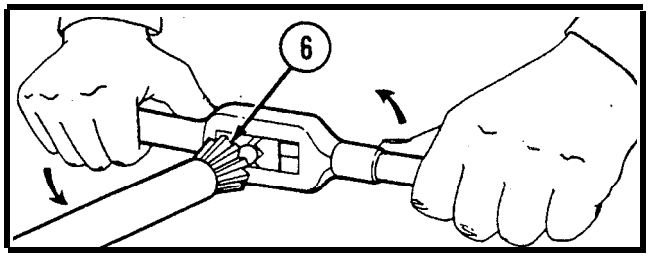
7 Repeat steps 5 and 6 until the pipe is cut through.

NOTE

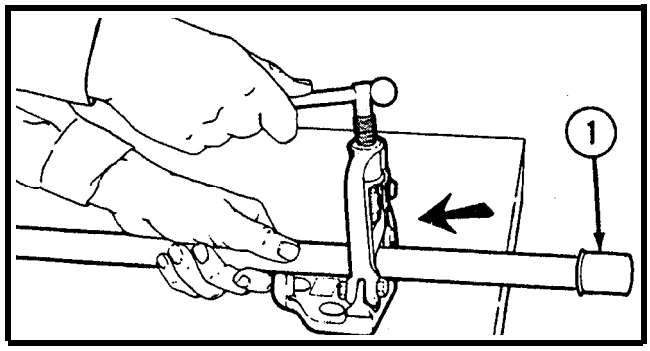
Be sure the cutter is at a right angle to the pipe as shown to keep the wheel on track.



8 Remove the shoulder (the rough edge left by cutting) from the outside of the pipe with a file (5).



9 Remove the burr from the inside of the pipe with a pipe reamer (6). (See Chapter 39 for care and use of pipe reamers.)



10 Place protective cap (1) on cut pipe end and remove from vise.

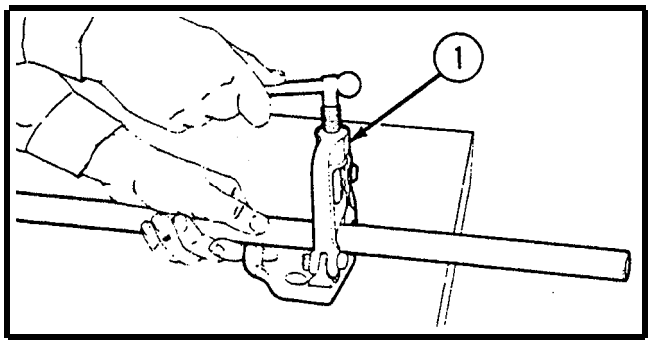
NOTE

If the part of the pipe you cut off is going to be used, put in vise and repeat steps 8 and 9. If you are going to store the pipe, put the protective cover back on.

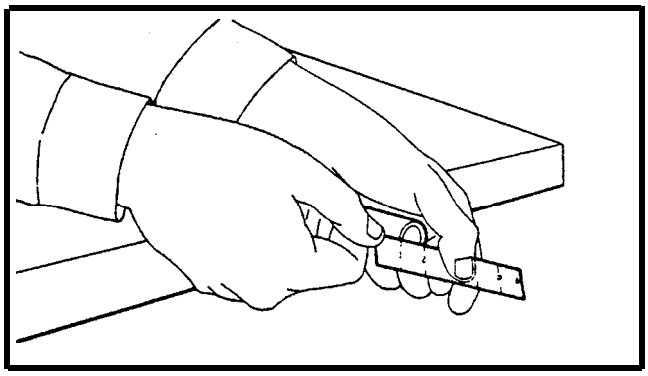
USING A PIPE THREADING SET

WARNING

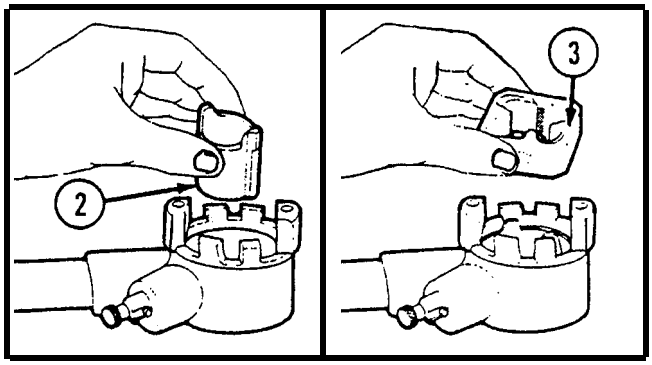
PIPE ENDS ARE EXTREMELY SHARP.
USE CARE WHEN HANDLING.



1 Clamp pipe securely in pipe vise (1) with end to be threaded extending beyond the edge of the vise jaws as shown.



2 Measure inside pipe diameter to determine the proper die.

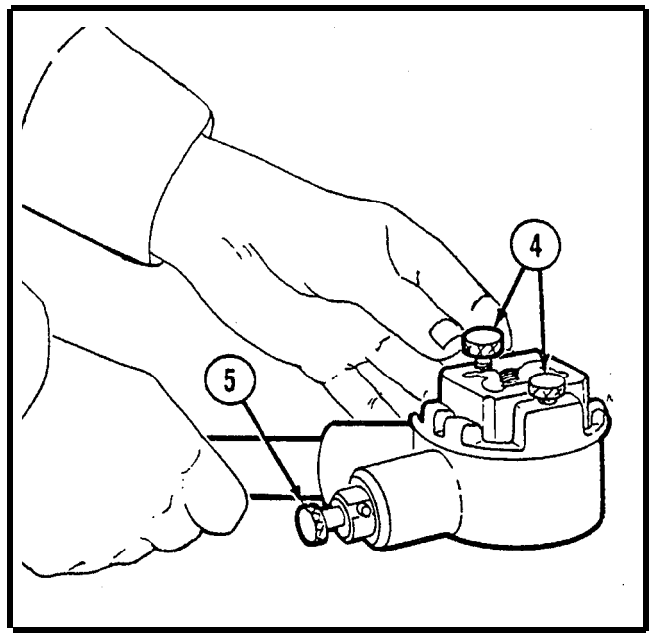


3 Inspect the die for nicks, and be sure that it is sharp.

Assemble die on ratchet die stock as shown in steps 4, 5, and 6.

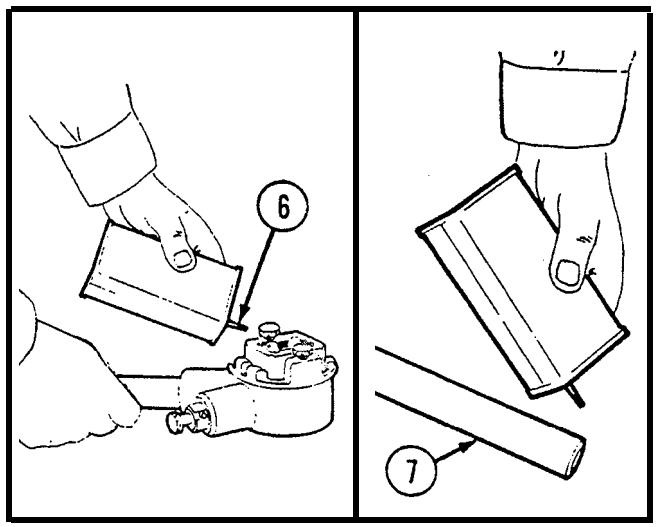
4 Insert collar (2).

5 Insert cutting die (3) over top of collar (2).



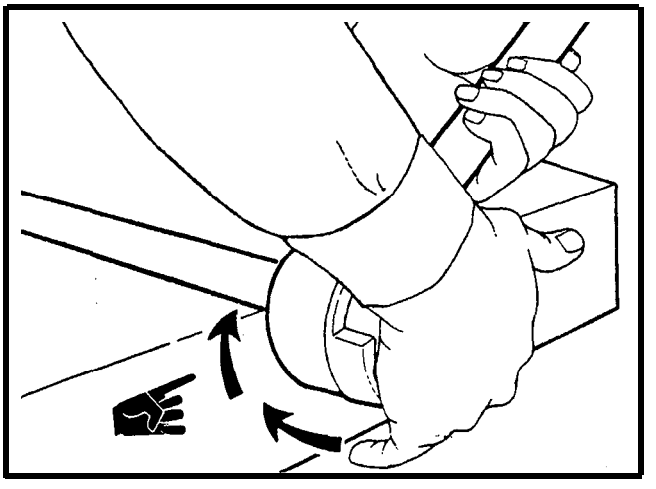
6 Secure in place with locking screws (4).

7 Set ratchet to turn in a counterclockwise direction by pulling out ratchet control knob (5) and turning it 180 degrees. The ratchet permits cutting threads on pipes where it is not possible to turn the handle 360 degrees. It is set for clockwise or counter-clockwise rotation by pulling out and turning the ratchet control knob (5) from one detent to the other.

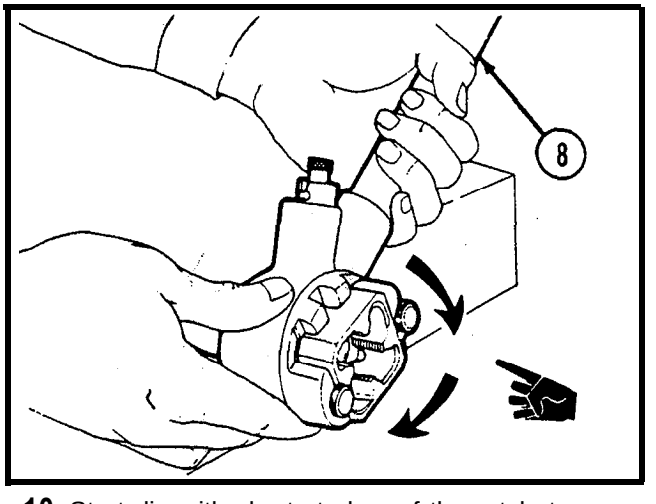


8 Apply cutting oil (6) to die and to end of pipe (7) to prevent overheating of dies and damaging of threaded surface.

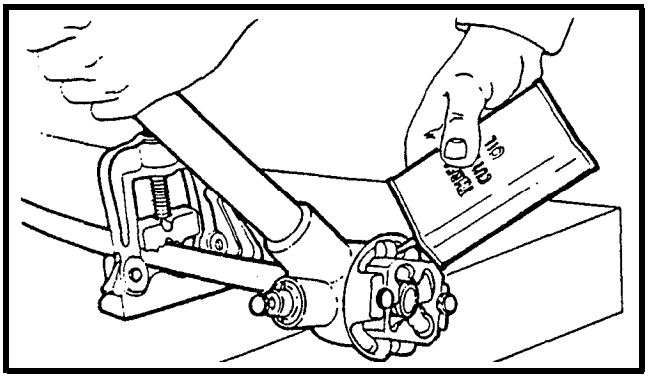
USING A PIPE THREADING SET - Continued



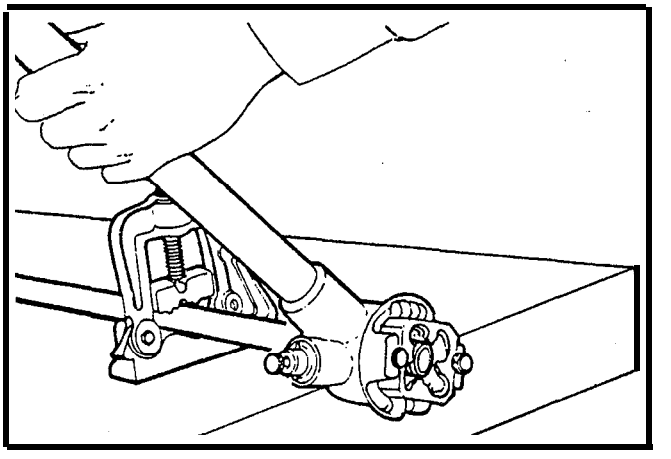
9 Slide cutting die over end of pipe to be threaded and apply light pressure with the heel of your hand.



10 Start die with short strokes of the ratchet handle (8). Be sure the die is going on the pipe squarely.



11 After a full turn of the die, apply another coat of cutting oil.

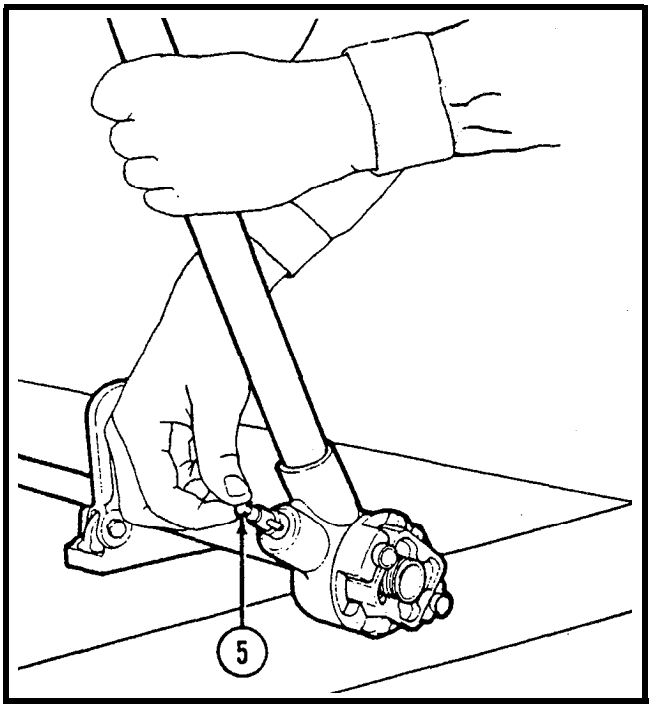


12 After two more turns on the die, back off one turn and apply a coat of cutting oil.

NOTE

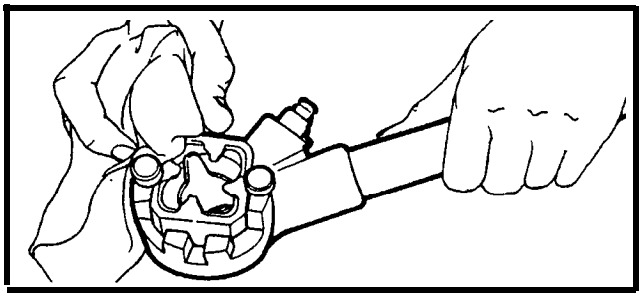
If metal shavings become clogged in the die, remove the die and clean it with a piece of cloth.

13 Keep repeating step 11 until desired thread length is obtained.

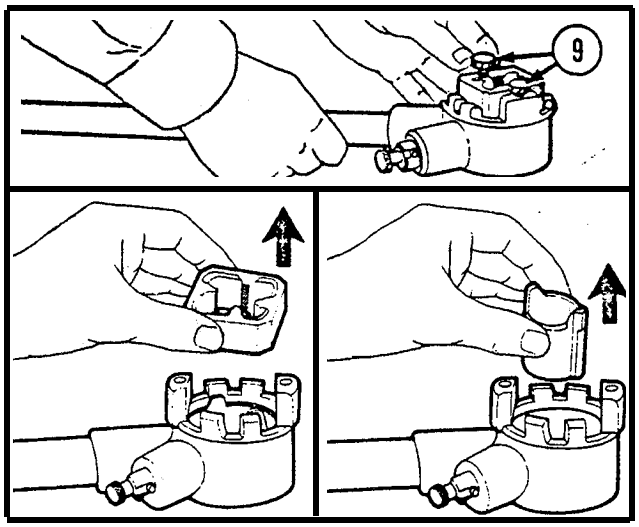


14 Reverse ratchet by pulling ratchet control knob (5) from detent and turning it 180 degrees. Then back up the cutting die.

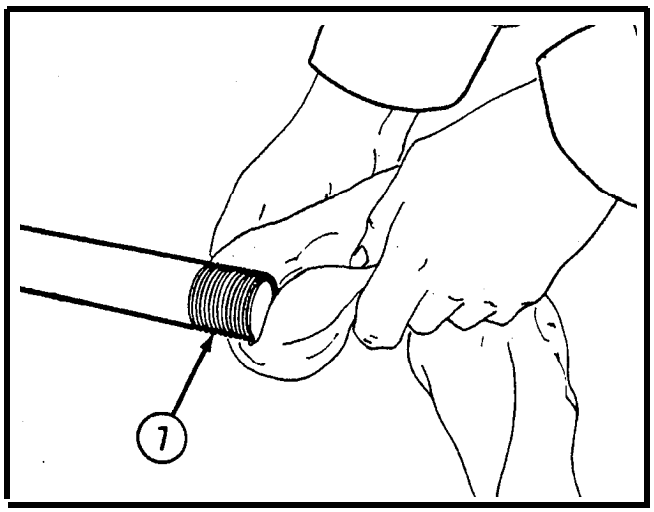
USING A PIPE THREADING SET - Continued



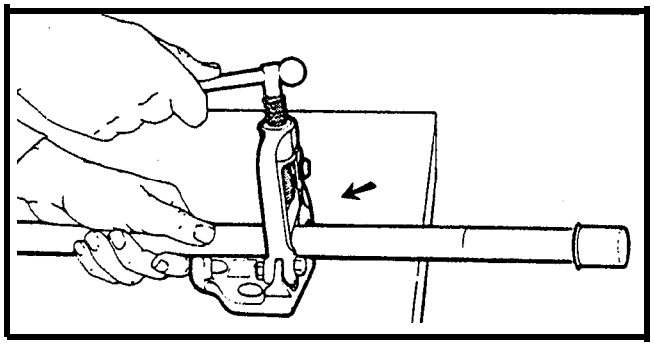
15 Wipe excess oil and metal shavings from die and ratchet handle.



16 Disassemble the die from the ratchet handle as shown, by removing locking screws (9). Remove die and collar from ratchet head.



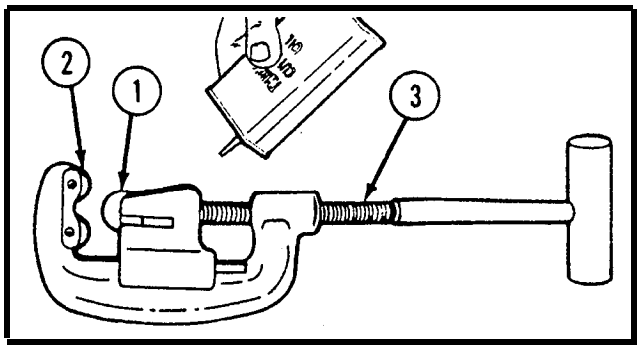
17 Wipe excess oil and shavings from threaded end of pipe (7).



18 Place cap, if available, over threads and remove the pipe from the vise.

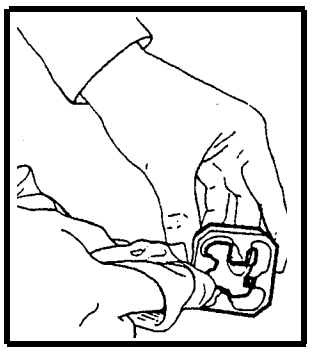
CARE OF PIPE CUTTERS AND THREADING SETS

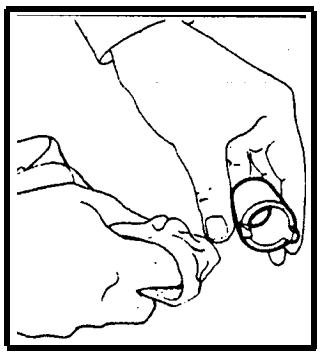
PIPE CUTTERS



1. Clean and lightly oil the cutter wheel (1) roller guide (2) and adjusting screw (3).
2. Store on a rack or in a box which protects the cutting wheel.

THREADING SETS





1. Wipe off excess cutting oil and clean metal shavings from the cutting die edges and collar.
2. Store in a case or box which will protect the cutting dies.